UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,420	11/16/2001	Anthony Cake	455610-2490	8576

20999 7590 05/21/2009

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER	
RICHER, AARON M	

ART UNIT	PAPER NUMBER
2628	

MAIL DATE	DELIVERY MODE
05/21/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/988,420	CAKE ET AL.	
	Examiner	Art Unit	
	AARON M. RICHER	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21 and 45-52* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21 and 45-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed March 9, 2009 have been fully considered but they are not persuasive. Applicant's arguments with respect to claims 1, 14, and 45 have been considered but are moot in view of the newly cited portions of Rogers. As to claim 45 specifically, applicant argues that Rogers does not disclose elements that are placed based in part on their function and inputs/outputs. However, col. 26, lines 35-40 discloses a graph indicator that is placed in a certain way because of its function and the terminal that is controlling (i.e. outputting) to it.

Claim Rejections - 35 USC § 112

2. Claims 45-52 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Claim 45 recites "means for providing a first processing element" and "means for providing a second processing element". It appears from the specification and fig. 21 that there is a computer system (with inherently associated elements, such as a processor and memory) that performs the method. This is also stated in the newly amended claim 1. Since no other "means" for performing the invention is disclosed, examiner must interpret this computer system as the means that are providing a first processing element and a second processing element. Since there is only one means

performing the invention, the claim limitations of one means for a first processing element and a second means for a second processing element constitute new matter. The same analysis can be applied to the third means that is recited in claims 46-49.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 10-18, 20, 45, and 51 are rejected under 35 U.S.C. 102(b) as being anticipated by Rogers (U.S. Patent 5,497,500).

6. As to claims 1, 14, and 45, Rogers discloses a method for generating a graphical representation of a processing web of an oscilloscope to represent processing apparatuses of the oscilloscope in the data flow processing of waveform signals by said oscilloscope and to control the oscilloscope (col. 3, lines 25-39; col. 10, lines 25-30; the invention is for controlling an instrument, one of which can be an oscilloscope), comprising:

dynamically determining, by said processor, as a function of changing functionalities and capabilities of a first processing apparatus (col. 35, lines 15-52; virtual instruments can become parts of a subroutine, subVI's, a change in functionality which is indicated graphically; also see col. 42, lines 43-59), a first processing element of said processing web corresponding to a first processing apparatus of the oscilloscope for processing a received waveform signal (fig. 22; col. 26, line 22-col. 27, line 40; a

number of processing elements are shown; to be placed, a determination of what element to place must take place);

dynamically placing a first processing element in a particular location based at least in part upon its function, location in said processing web, operating capabilities of and various inputs to and outputs from said first processing element (fig. 19a-k; fig. 22-25; fig. 47-122; col. 26, line 22-col. 27, line 40; a number of elements placed by a user or that can be placed by a user are shown; see in particular fig. 19b and col. 26, lines 35-40 in which a graph is placed and an associated terminal is added because the terminal's function, operating capabilities and output correspond to the graph; also note that the terminal is placed "in the same position relative to the other terminal as the graph is to the knob");

dynamically determining by said processor, as a function of changing functionalities and capabilities of a second processing apparatus (col. 35, lines 15-52; virtual instruments can become parts of a subroutine, subVI's, a change in functionality which is indicated graphically; also see col. 42, lines 43-59), a second processing element of said processing web corresponding to a second processing apparatus of the oscilloscope for processing a signal (fig. 22; col. 26, line 22-col. 27, line 40; a number of processing elements are shown; to be placed a determination of what element to place must take place);

dynamically placing said second processing element in a particular location downstream from said first processing element based at least in part upon its function, various inputs to and outputs from said second processing element, and an operating

relationship between said second processing element and said first processing element (fig. 19a-k; fig. 22-25; fig. 47-122; col. 26, line 22-col. 27, line 40; a number of elements placed by a user or that can be placed by a user are shown; see for example fig. 19g in which a loop function has been placed downstream from a control knob function), each of said first and second processing elements having at least one input pin and at least one output pin (fig. 19a-k; fig. 22-25; fig. 47-122; col. 26, line 22-col. 27, line 40; many of the processing elements have at least one input and output pin; for instance the "wave" of fig. 19k and the "calculate frequency" of fig. 22), and each processing element adapted to receive a waveform signal, to process the received waveform signal, and to forward the processed waveform signal from its output pin to a downstream processing element (fig. 111, fig. 112a-c; the invention clearly processes waveforms from one element to another; also see fig. 19k, “wave” portion);

dynamically graphically connecting said first processing element to second processing element after said first and second processing elements have been placed at their respective locations in said processing web, indicating the flow of data therebetween (fig. 19a-k; fig. 22-25; fig. 47-122; col. 26, line 22-col. 27, line 40; a number of elements placed by a user or that can be placed by a user are shown; see for example the sequence of figures 19e-k which show that the connection happens after the elements have been placed at their respective locations)

wherein said first processing element is a waveform acquisition processing element (fig. 19k, see “wave” portion);

and wherein said second processing element is a display processing element (fig. 22, see "response graph").

7. As to claims 2 and 3, Rogers discloses a connecting step connecting an output pin of said first element to an input pin of said second element, using a line, in accordance with the data flow processing of the oscilloscope (fig. 19a-k, fig. 22; lines are clearly used to connect a first element output to a second element input).

8. As to claim 10, Rogers discloses a method wherein said first processing element is updated at a faster rate and said second processing element is updated at a slower rate (col. 47, line 53-col. 48, line 5; a function waiting on another function is disclosed).

9. As to claim 11, Rogers discloses a method wherein said update of said first processing element and update of said second processing element are synchronized (col. 47, line 53-col. 48, line 5; a synchronization method for functions waiting on other functions is disclosed).

10. As to claim 12, Rogers discloses a method wherein said update of said first and second processing elements is controlled by an update processing element (col. 47, line 53-col. 48, line 5; the execution subsystem which provides a "wake up" to another function reads on an "update processing element").

11. As to claim 13, Rogers discloses a method wherein a viewing object may be placed at a location on the graphical representation to see a current, live output at that location (col. 39, lines 19-20; a "real time chart" option is given in a menu for configuration of graphical objects).

12. As to claim 15, Rogers discloses determining a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a signal;

and placing said third processing element in a particular location downstream from said first processing element and upstream from said second processing element based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and a relationship between said third processing element and said first and second processing elements so that the signal processed by the first processing apparatus is forwarded to the third processing apparatus, and the signal processed by the second processing apparatus is forwarded to the third processing apparatus;

wherein said third processing element performs an intermediate processing step between said first processing element and said second processing element (fig. 19a-k; fig. 22-25; fig. 47-122; col. 26, line 22-col. 27, line 40; a number of intermediate processing elements with multiple inputs are disclosed).

13. As to claim 16, Rogers discloses determining a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a signal;

and placing said third processing element in a particular location based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and a relationship between said third processing element and said first and second processing elements so that the signal processed by the first

processing apparatus is forwarded to the third processing apparatus, and the signal processed by the second processing apparatus is forwarded to the third processing apparatus (fig. 19a-k; fig. 22-25; fig. 47-122; col. 26, line 22-col. 27, line 40; a number of processing elements with multiple inputs are disclosed);

Rogers does not disclose a method wherein said third processing element is a static memory input. However, official notice has been taken of the fact that storing output of processing elements in static memory is well-known in the art (see MPEP 2144.03). It is also noted that given the large amount of functions already disclosed by Rogers, including display functions and processing functions, and the fact that Rogers does store outputs in memory, it would not be difficult to add a graphical representation of static memory to the other graphical representations disclosed by Rogers. It would have been obvious to one skilled in the art to modify Rogers to include a static memory input in a graphical representation in order to allow a user to more easily store data in memory.

14. As to claim 17, Rogers discloses determining a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a signal;

and placing said third processing element in a particular location based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and a relationship between said third processing element and said first and second processing elements so that the signal processed by the first processing apparatus is forwarded to the third processing apparatus, and the signal

processed by the second processing apparatus is forwarded to the third processing apparatus;

wherein said third processing element is a display trace output including at least one processing function (fig. 121).

15. As to claim 18, Rogers discloses determining a third processing element of said processing web corresponding to a third processing apparatus of the oscilloscope for processing a signal;

and placing said third processing element in a particular location based at least in part upon its function in said processing web, various inputs to and outputs from said second processing element, and a relationship between said third processing element and said first and second processing elements so that the signal processed by the first processing apparatus is forwarded to the third processing apparatus, and the signal processed by the second processing apparatus is forwarded to the third processing apparatus;

wherein said third processing element is a parameter output (col. 39, lines 19-20; a real time chart reads on a parameter output).

16. As to claims 20 and 51, Rogers discloses a method wherein each of said first and second processing elements includes an indication of the number of inputs and outputs thereof (fig. 22, fig. 104, etc., every diagram with elements includes a number of input and output pins).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. Claims 4-9, 19, 21, 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of Zink (U.S. Patent 6,738,964).

19. As to claim 4, as best interpreted, neither Rogers nor Herring expressly discloses a line drawn to include a plurality of designations based upon a type of data being carried thereon. Zink, however, discloses different colors used for different types of data being carried on wires (col. 8, lines 26-37). The motivation for this is to illustrate the flow of both data and control information (col. 8, lines 26-37). It is further noted that much like the Rogers reference, the Zink reference is concerned with graphically representing a system for processing signals (col. 2, lines 31-44). It would have been obvious to one skilled in the art to modify Rogers to designate a type of data being carried on a wire in order to illustrate the difference between data and control information as taught by Zink.

20. As to claim 5, as best interpreted, Zink discloses a method wherein said plurality of designations are colors (col. 8, lines 26-37).

21. As to claim 6, Zink discloses a method wherein said at least one pin of said first processing element and said at least one pin of said second processing element are coded based upon a type of data to output therefrom, or received thereby, respectively (fig. 9, circles are used by one type, triangles are used by another type).

22. As to claim 7, Zink discloses a method wherein said coding is by color (col. 8, lines 26-37; the wires coming out of the pins are of different colors, which effectively means that the pins themselves are coded by color as well).

23. As to claim 8, Zink discloses a method wherein said coding is by symbol (fig. 9, circles are used by one type, triangles are used by another type).

24. As to claim 9, Zink discloses a method wherein said coding is by graphical designation (fig. 9, circles are used by one type, triangles are used by another type; this reads on a graphical designation).

25. As to claims 19 and 50, Zink discloses a method wherein said connection between said first processing element and said second processing element is provided in a color indicative of the type of data flowing therebetween (col. 8, lines 26-37). Motivation for combining the Zink and Rogers references can be found in the rejection of claim 4.

26. As to claims 21 and 52, Zink discloses a method wherein said inputs and outputs are provided in a color indicative of the type of data to be received or output thereon (col. 8, lines 26-37; the wires coming out of the pins are of different colors, which effectively means that the pins themselves are coded by color as well). Motivation for combining the Zink and Rogers references can be found in the rejection of claim 4.

27. Claims 46-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of Herring (U.S. Patent 6,606,326).

28. As to claims 46-49, see the rejections to claims 15-18 respectively. Rogers, however, does not disclose a first processing element forwarding the processed

waveform signal in response to a request to receive the processed waveform signal passed upstream from a second processing element, wherein the first element stays idle until it receives the second element. Herring, however, discloses a processing element that waits for a signal from a second element and then transmits a processed waveform signal (fig. 2; col. 11, lines 10-46). Note that no buffers exist in the sending processing element, indicating that the processing element does not process and store data before a request to transmit is received. The motivation for this is to selectively control the first element's "right" to send data (col. 11, lines 19-35) and therefore prevent the first element from sending too much data. It would have been obvious to one skilled in the art to modify Rogers to have a downstream element request data from an upstream element in order to prevent too much data from being sent as taught by Herring.

Conclusion

29. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AARON M. RICHER whose telephone number is (571)272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Aaron M Richer/
Examiner, Art Unit 2628
5/18/09